

scended a great many times. I thought, at first, it had spun a new Thread at every Descent, and was desirous to have measured how long an one I could cause it thus to spin; but, upon a stricter Examination, I very plainly perceived, that whenever it ascended, it wound its Thread with its Feet into a sort of Coil, and when it descended only unravelled it out again.

The Manner how they perform this is diverting enough; but as Spiders may be had almost in every Place, and the Experiment is so easily tried, I shall forbear describing it; and only add, that as these Coils of Thread are exactly like those floating in the Air towards the End of Summer, I think it is not improbable those are made in the same Manner, when Spiders have a Mind to direct their Course in the same Direction their Threads lie.

XVII. *Some Remarks on the precious Stone called the Turquoise; by Cromwel Mortimer, Sec. R. S. &c.*

Read Feb. 26. 1746-7. **T**HIS Stone has received its modern Name of *Turchesia*, and *Turquoise*, from its being most commonly brought from *Turky* into various Parts of *Europe*. *De Boadt* * says, the Colour of this Gem is a Variegation of Green, White, and Blue; and that there are two Sorts of it, the oriental, from the *East Indies* and *Persia*, and the occidental,

* Gemmar. et Lap. Hist.

occidental, from *Spain, Germany, Bohemia, Silesia, &c.*; that in *Persia*, where it is found in greatest Plenty, it adheres to black Stones, as if it were an Excrement or a Transudation from them. A Stone of this sort is seldom found to exceed a Walnut in Size; and he mentions one in the Great Duke's *Museum*, on which the Head of *Julius Cæsar* is engraved, as a very extraordinary Sample: He adds, That he never saw one bigger than an Hazel-nut; that some of the oriental ones have the Faculty of preserving their Colour perpetually, which are called Stones of the old Rock; and that others lose their Colour gradually, and are called of the new Rock. He then gives an Instance of a *Turquoise* which had lost its Colour upon being laid by some time after its Owner's Death, which recover'd its beautiful Colour upon our Author's wearing it upon his Finger in a Ring.

Cæsius, in his *Treatise de Mineralibus*, p. 601. says, This Stone is called *Turcoïs* by *Mylius*, in his *Basilica chemica*; by *Albertus Magnus*, in his *Treatise of Minerals*; and by *Rueius*, in his *Treatise of Gems*: but *Turca*, by *Caussin* *de Lapillis symbolicis*. *De Boodt*, and *Dr. Woodward*,* with other modern Writers, take it for the *Callais* of *Pliny*. *Salmasius*, in his *Plinian. Exercit.* p. 142. says, Many have mistaken the modern *Turquoise* for the *Cyanus*, but that the *Cyanus* was transparent like the *Sapphire*; whereas the *Turquoise* is a sort of *Jasper*.

Dr. Woodward, in his Letter to *Sir Jo. Hoskyns*,† says, That the *Turcoïs*, or *Callais* of *Pliny*, is nothing else but fossil Ivory tinged with Copper. I
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* Method of *Fossils*. Letters, p. 17.

† *Ibid.* p. 16.

do not deny, that some Stones sold for *Turquois*, and possibly all that the Doctor saw were certainly such; but I imagine those which the Authors call of the old Rock, and in which the Colour is permanent, are real mineral Stones: This Sample now before us seems to shew this, from both the Form and Size: Its Shape shews it not to be Part of any animal Bone; but its botryoid Form is to me a Demonstration that it is the Product of Fire, which had once melted this Substance; and that when it cool'd, its Surface was formed into Bubbles and Blisters, in the same manner as the *Hæmatitis botryoides* or Bloodstone, whose Surface consists of Knobs, resembling a Bunch of Grapes.

That the *Elephas* *ἐλεφανθίνος*, or *Ebur fossile* of *Theophrastus* *, said to be of various Colours, I do not in the least deny to be tintured with Copper, and to be what Dr. *Woodward* calls the *Turquois*: Indeed I suspect it to be what *De Boodt* calls of the new Rock; and says is liable to lose its Colour, which it recovers again from the *Effluvia* of the Person who wears it. I therefore, for Distinction sake, think all these Stones of the Ivory Origin should be called *Pseudo-Turquesiæ*, or bastard *Turquois*; and the other Sort, of which this before us is one, the true or real *Turquois*; for, by Examination in the chemical Way, I find it to be a very rich copper Ore; some of it pounded and dissolved in Spirit of Hartshorn gives a deep Blue; in *Aqua fortis* a fine Green; and an iron Wire put into it was in 1 Hour's time incrustled with Copper: Some of it calcined, without any Flux in a Crucible, run

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* See *Theophrastus's* Hist. of Stones, translated, &c. *John Hill*, Lond. 1746. 8°. p. 94.

to a Slag, or half vitrified Substance; whereas the same Heat, had it been Ivory or Bone, would have reduced it to a white Ash like Bone-Ashes; for I exposed it to such a Fire as vitrified the Tile that cover'd it. Its Hardness and Consistence to an Engraver's Tool seems to be the same as common white Marble: Its Colour is not mended by Heat, but it grows brittle when red hot.

This Specimen, now shewn to the *Society*, was about 12 Inches long, 5 Inches broad, and in some Places near 2 Inches thick; rough on the under Side, as though broken off from the Rock it had been affixed to; and the upper Side was composed of smooth polished Knobs, in Form like to the botryoid Iron Ore.

Sir *Hans Sloane*, in his noble *Museum*, has several Specimens of these oriental *Turquoises*, all botryoid; especially a Mass from *China*, about three Inches long, two broad, and near an Inch thick: All which seem to be Copper Ores: And he has likewise Samples of *Turquoises* from *Spain*, and the South of *France*; which are all small, and seem really to be Pieces of Ivory tinged with Copper.

XVIII. *A Description of a curious Echinites;* by Mr. Henry Baker, F. R. S.

Read Feb. 26.
1746-7.

MR. Baker takes the Liberty of shewing the *Society* a very extraordinary *Echinites*, the like to which he has never seen in any *Museum*, or found described by any Author. For the *Echinites* usually met with, are made up either of Chalk or Flint, or some stony, chalky, or

sparry